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=> s acetylation and dendrimer?

69650 ACETYLATION

9536 DENDRIMER?

L1 27 ACETYLATION AND DENDRIMER?

=> d

- L1 ANSWER 1 OF 27 CA COPYRIGHT 2007 ACS on STN
- AN 146:317121 CA
- TI Lactotriaose-containing carbosilane dendrimers: Syntheses and lectin-binding activities
- AU Yamada, Akihiro; Hatano, Ken; Koyama, Tetsuo; Matsuoka, Koji; Takahashi, Naonori; Hidari, Kazuya I. P. J.; Suzuki, Takashi; Suzuki, Yasuo; Terunuma, Daiyo
- CS Area for Molecular Function, Division of Material Science, Graduate School of Science and Engineering, Saitama University, Sakura-ku, Saitama, 338-8570, Japan
- SO Bioorganic & Medicinal Chemistry (2007), 15(4), 1606-1614 CODEN: BMECEP; ISSN: 0968-0896
- PB Elsevier Ltd.
- DT Journal
- LA English
- OS CASREACT 146:317121
- RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 27

L1 ANSWER 27 OF 27 CA COPYRIGHT 2007 ACS on STN

AN 116:130381 CA

- TI Preparation of siloxane dendrimers
- IN Uchida, Hiroaki; Yoshino, Koji; Kabe, Yoshio
- PA Kao Corp., Japan
- SO Jpn. Kokai Tokkyo Koho, 10 pp. CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03263430	A	19911122	JP 1990-62250	19900313
	JP 2763646	B2	19980611		
PRAI	JP 1990-62250		19900313		

#### => d ti 20-26

- L1 ANSWER 20 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Hyperbranched Thermotropic Liquid Crystalline Polyesters Composed of Aromatic Ester Type Mesogens and Polymethylene Spacers
- L1 ANSWER 21 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI The first organometallic dendrimers: Design and redox functions
- L1 ANSWER 22 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Utilization of dendritic framework as a multivalent ligand: a functionalized gadolinium(III) carrier with glycoside cluster periphery
- L1 ANSWER 23 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI An infrared spectroscopic study of a hyperbranched, dendrimer -like, polyester and its blends with poly(4-vinylphenol)
- L1 ANSWER 24 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Average and maximum charge states of arginine-containing dendrimer -like peptide ions formed by electrospray ionization
- L1 ANSWER 25 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Synthesis and antigenic properties of sialic acid based dendrimers
- L1 ANSWER 26 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI A simple procedure for the preparation of chiral tris(hydroxymethyl) methane derivatives

## => d 22

- L1 ANSWER 22 OF 27 CA COPYRIGHT 2007 ACS on STN
- AN 134:71998 CA
- TI Utilization of dendritic framework as a multivalent ligand: a functionalized gadolinium(III) carrier with glycoside cluster periphery
- AU Takahashi, Masaki; Hara, Yusuke; Aoshima, Kengo; Kurihara, Hideo; Oshikawa, Tatsuo; Yamashita, Mitsuji
- CS Department of Materials Science and Chemical Engineering, Faculty of Engineering, Shizuoka University, Shizuoka, 432-8561, Japan
- SO Tetrahedron Letters (2000), 41(44), 8485-8488 CODEN: TELEAY: ISSN: 0040-4039
- PB Elsevier Science Ltd.
- DT Journal
- LA English
- RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 22 OF 27 CA COPYRIGHT 2007 ACS on STN
Ll
              diethylenetriamine with \delta-gluconolactone, using acetic
AB
    anhydride to protect the hydroxyl groups. The complexes were obtained by
    heating the mixture of dendrimer ligand and Gd2O3 in aqueous solution at
     100°. The acetyl groups could be cleaved by NaOMe treatment.
     dendrimers, which contain four and twelve glucose moieties on the
    mol. surface were obtained with good yields in every step. The.
     analyses show the dendritic structure, while the formation of gadolinium
     chelates was deduced on the basis of HPLC data. The dendrimer
     -Gd chelates are of interest as contrast agents for MRI studies, with the
     dendrimer-glycoside cluster acting as carrier of the contrast
     agent.
     diethylenetriamine pentaacetate coupling cyclic anhydride
ST
     dendrimer prepn; glycoside periphery polyamide dendrimer
     chelate lanthanide; gadolinium complex glycoside polyamide
     dendrimer prepn
     Polyamides, preparation
IT
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (dendrimers, glycoside-functionalized; preparation of
        glycoside-functionalized polyamide dendrimer multivalent
        ligands and complexation with gadolinium and structure and solubility of
        chelates)
     Polymer chains
IT
        (hyperbranched; preparation of glycoside-functionalized polyamide
        dendrimer multivalent ligands and complexation with gadolinium
        and structure and solubility of chelates)
     Addition reaction
IT
        (nucleophilic; preparation of glycoside-functionalized polyamide
        dendrimer multivalent ligands and complexation with gadolinium
        and structure and solubility of chelates)
     Dendritic polymers
IT
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (polyamides, glycoside-functionalized; preparation of glycoside-
        functionalized polyamide dendrimer multivalent ligands and
        complexation with gadolinium and structure and solubility of chelates)
     Acetylation
IT
     Amidation
     Complexation
     Coupling reaction
        (preparation of glycoside-functionalized polyamide dendrimer
        multivalent ligands and complexation with gadolinium and structure and
        solubility of chelates)
                                   314732-91-7P
                                                  314732-92-8P
                    220431-61-8P
     220431-60-7P
IT
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (intermediate; preparation of glycoside-functionalized polyamide
        dendrimer multivalent ligands and complexation with gadolinium
        and structure and solubility of chelates)
                    314748-77-1P
     314732-93-9P
IT
     RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
     (Preparation); RACT (Reactant or reagent)
        (preparation of glycoside-functionalized polyamide dendrimer
        multivalent ligands and complexation with gadolinium and structure and
        solubility of chelates)
     7440-54-2DP, Gadolinium, glycosidyl dendrimer complexes,
IT
                                  314748-78-2P
                  314732-94-0P
     preparation
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (preparation of glycoside-functionalized polyamide dendrimer
        multivalent ligands and complexation with gadolinium and structure and
        solubility of chelates)
     90-80-2, δ-Gluconolactone 108-24-7, Acetic anhydride
                                                               111-40-0,
IT
                          4248-19-5, tert-Butyl carbamate
                                                            12064-62-9,
     Diethylenetriamine
                                132491-90-8 195190-58-0, Diethylenetriamine
     Gadolinium oxide (Gd2O3)
```

pentaacetic acid bis(cyclic anhydride)
RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of glycoside-functionalized polyamide dendrimer
 multivalent ligands and complexation with gadolinium and structure and
 solubility of chelates)

## => d 25 ab

- L1 ANSWER 25 OF 27 CA COPYRIGHT 2007 ACS on STN
- A symposium on solid-phase synthesis on Wang resin was used to construct AB dendritic  $\alpha$ -thiosialosides which can be used as inhibitors of influenza virus hemagglutinins. The design of these new hyper-branched clusters is based on the rational scaffolding of L-lysine core structures using well established Fmoc-chemical and benzotriazolyl esters as coupling procedures. One step chain extension of all the lysyl-amino groups with chloroacetylglycylglycine active ester allowed the introduction of the required functionality necessary for the coupling to  $\alpha$ -thiosialoside derivative prepared under improved phase transfer catalyzed conditions. Well defined di-, tetra-, octa- and hexadecavalent dendritic  $\alpha\text{-thiosialosides}$  were thus prepared by a straight forward approach. The antigenicity of the dendrimers was compared to a known sialylated polymer used as reference Regioselective 9-0-acetylation of the octavalent dendrimers was also achieved to provide access to inhibitor of other strains of influenza virus hemagglutinins.

## => d ti 10-19

- L1 ANSWER 10 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Poly(amidoamine) dendrimer-based multifunctional engineered nanodevice for cancer therapy
- L1 ANSWER 11 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Synthesis of perfluorinated functionalized, branched ethers
- L1 ANSWER 12 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Synthesis of telechelic and dendritic graft polymers
- L1 ANSWER 13 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI DNA-Directed Synthesis of Generation 7 and 5 PAMAM Dendrimer Nanoclusters
- L1 ANSWER 14 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Extended  $\pi$ -Conjugated Dendrimers Based on Truxene
- L1 ANSWER 15 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Acetylation of Poly(amidoamine) Dendrimers
- L1 ANSWER 16 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Soluble dipolar dendrimers with peripheral sulfone groups
- L1 ANSWER 17 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI 1H and 13C NMR Spectra of a Hyperbranched Aromatic Polyamide from p-Phenylenediamine and Trimesic Acid
- L1 ANSWER 18 OF 27 CA COPYRIGHT 2007 ACS on STN
- TI Hyperbranched architectures for NLO polymers
- L1 ANSWER 19 OF 27 CA COPYRIGHT 2007 ACS on STN
- Synthesis of clustered xenotransplantation antagonists using palladium-catalyzed cross-coupling of prop-2-ynyl  $\alpha\text{-}D\text{-}$  galactopyranoside

- L1 ANSWER 15 OF 27 CA COPYRIGHT 2007 ACS on STN
- AN 139:197903 CA
- TI Acetylation of Poly(amidoamine) Dendrimers
- AU Majoros, Istvan J.; Keszler, Balazs; Woehler, Scott; Bull, Tricia; Baker, James R., Jr.
- CS Center for Biologic Nanotechnology, University of Michigan, Ann Arbor, MI, 48109-0533, USA
- SO Macromolecules (2003), 36(15), 5526-5529 CODEN: MAMOBX; ISSN: 0024-9297
- PB American Chemical Society
- DT Journal
- LA English
- RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

#### => d ab 15

- L1 ANSWER 15 OF 27 CA COPYRIGHT 2007 ACS on STN
- The precise stoichiometry required for the acetylation of surface amines of a poly(amidoamine) (PAMAM) dendrimer generation 5 (G5) was verified by using potentiometric titration, gel permeation chromatog., and NMR spectroscopy. The average number of primary amine

groups, absolute mol. weight, and mol. weight distribution of G5 PAMAM were determined by

potentiometric titration and GPC. These fundamental parameters were used to design the stoichiometry of an acetylation reaction that yielded acetylation fractions from 0 to 100% of the primary amines on the macromol. GPC refractive index detector confirmed that the diameter of the dendrimer related inversely to the degree of acetylation. The acetylated dendrimers do not follow the elution behavior of the conventional polymer mols. most probably because of their spherical shape and polycationic nature. This study clarifies the nature of the acetylation reaction and provides a well-defined acylated macromol., which can serve as a scaffold for the development of complex dendrimeric structures.

# => d 13, 16

- L1 ANSWER 13 OF 27 CA COPYRIGHT 2007 ACS on STN
- AN 140:357830 CA
- TI DNA-Directed Synthesis of Generation 7 and 5 PAMAM Dendrimer Nanoclusters
- AU Choi, Youngseon; Mecke, Almut; Orr, Bradford G.; Holl, Mark M. Banaszak; Baker, James R., Jr.
- CS Department of Biomedical Engineering, School of Engineering, Department of Physics, School of Literature, Art and Science, University of Michigan, Ann Arbor, MI, 48109, USA
- SO Nano Letters (2004), 4(3), 391-397 CODEN: NALEFD; ISSN: 1530-6984
- PB American Chemical Society
- DT Journal
- LA English
- RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L1 ANSWER 16 OF 27 CA COPYRIGHT 2007 ACS on STN
- AN 138:89532 CA
- TI Soluble dipolar dendrimers with peripheral sulfone groups

- AU Lu, Meng; Pan, Yongchun; Peng, Zhonghua
- CS Department of Chemistry, University of Missouri-Kansas City, Kansas City, MO, 64110, USA
- SO Tetrahedron Letters (2002), 43(44), 7903-7906 CODEN: TELEAY; ISSN: 0040-4039
- PB Elsevier Science Ltd.
- DT Journal
- LA English
- OS CASREACT 138:89532
- RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

# => d ab 13,16

- L1 ANSWER 13 OF 27 CA COPYRIGHT 2007 ACS on STN
- A novel nanostructure was constructed using two different generations of AB polyamidoamine (PAMAM) dendrimers and three sets of complementary oligonucleotides (34, 50, and 66 bases in length). oligonucleotides were covalently conjugated to partially acetylated generation 5 and 7 PAMAM dendrimers, and these conjugates were characterized by agarose gel electrophoresis. The agarose gel electrophoresis appearance of these covalently linked oligonucleotide dendrimers was also compared to electrostatically bound oligonucleotide-dendrimer complexes. Equimolar amts. of the G5 and G7 conjugates were then hybridized together to allow for the DNA-directed self-assembly of supramol. clusters. Dynamic light scattering (DLS) anal. indicated that the overall size of the DNA-linked dendrimer clusters tended to increase according to the length of the oligonucleotide used ranging from 30 to 50 nm, which agreed with the diameter of dendrimer nanoclusters predicted by mol. modeling. DNA-linked novel dendrimer nanoclusters were also examined with tapping-mode atomic force microscopy (AFM) to distinguish the DNA-linked structure from a nonlinked simple G7/G5 dendrimer mixture AFM image anal. suggested that the distance between the DNA-linked dendrimers was significantly larger than what was seen after simple mixing of G7/G5 dendrimers. The mixture showed a few dendrimers phys. in contact with an interdendrimer distance of 8-10 nm. The interdendrimer distance of the nanoclusters linked with the 50-base-long oligonucleotide pairs was measured to be 21  $\pm$  2 nm, which is in agreement with the theor. length of the oligonucleotides duplex. These results suggest that PAMAM dendrimers can be self-assembled via complementary oligonucleotides to form supramol. nanoclusters.
- L1 ANSWER 16 OF 27 CA COPYRIGHT 2007 ACS on STN
- AB A dipolar dendron based on meta and para linked poly(Ph acetylene)s with eight electron donor-acceptor pairs in direct conjugations is synthesized through a convergent approach. UV-vis absorption and fluorescence emission spectra of the G1, G2, and G3 nonlinear optical sulfone-containing dendrons are given.